

Application No. 10/670,272
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Remarks/Arguments

Claims 1 - 27 remain in the application. Independent claim 21 has been amended to more explicitly recite the location of the UV emitter and sensor unit within the fluid treatment zone, as is explicitly recited in Independent claims 1 and 13.

The Examiner rejected claims 1 - 4, 11 - 14 and 21 - 27 under 35 U.S.C. 102(e) as being anticipated in view of U.S. Patent No. 6,436,299 to Baarman et al. The Examiner rejected claims 5 - 10 and 15 - 20 under 35 U.S.C. 103(a) as being unpatentable over Baarman et al. in view of U.S. Patent No. 6,317,051 to Cohen. For the reasons set out below, Applicant respectfully traverses the rejections under 35 U.S.C. 102(e) and 103(a).

The present invention is directed to a fluid treatment system, a sensor unit for the fluid treatment system and an intelligent driver for a UV emitter of the system. As recited in each of independent claims 1, 13 and 21 the sensor unit and UV emitter are disposed within the fluid treatment zone. As is clearly described at para. 36 (with reference to Fig. 1), the fluid treatment zone 26 is "the region with chamber wall or walls 28 through which fluid flows and is irradiated by light from one or more UV emitters 30." As defined in Merriam-Webster's Collegiate Dictionary, 10th ed., the common meaning of "within" is "in or into the interior: INSIDE" and is used as a function word to indicate enclosure or containment. Applicant submits, therefore, that the claims of the present application require both a UV emitter and a sensor unit inside the fluid treatment zone where the fluid flows. As will be appreciated by the Examiner, the location of the UV emitter and sensor unit within the fluid treatment zone permits more effective irradiation and direct sensing as contrasted to systems that isolate the irradiation and sensing units outside the fluid flow.

By contrast, Baarman et al. discloses a UV emitter and a sensor unit that are both remote from the fluid treatment zone. As described at col. 15, line 64 to col. 16, line 2 and as shown in Fig. 2B, the fluid treatment zone is defined by a pair of quartz tubes 58 where the water flows and is irradiated by the ultraviolet lamp 60, which is clearly located outside the quartz tubes. Similarly, there is nothing in Baarman et al. to suggest that the electronics assembly 44, which is assumed to contain the necessary sensors, is located within the fluid treatment zone, nor that

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the sensors are disposed elsewhere within the overall system. In fact, the electronics assembly, which is described in greater detail throughout the remainder of the specification, is described at col. 6, lines 18 - 23, as being fit securely to the bottom shroud 18 into which, it must be presumed, the base of the ultraviolet lamp is received.

Therefore, Applicant submits that, as Baarman et al. neither describes nor suggests the disposition of a UV emitter or a sensor unit within a fluid treatment zone as recited in each of claims 1, 13 and 21, a person skilled in the art, having reference to Baarman et al., would not be lead directly and without difficulty, to the present invention. Withdrawal of the rejections under 35 U.S.C. 102(e) to claims 1, 13 and 21, and their dependent claims 2 - 4, 11, 12, 14, is, therefore, requested.

The Examiner cited Cohen as disclosing a sound/vibration detector connected to a control system. Cohen discloses a microphone for detecting leaks in high pressure water pipes. When a leak is detected, the system can take appropriate action to stop the water flow. Applicant first submits that Cohen is not within the art of water treatment systems, and is, therefore, not a proper reference to combine with Baarman et al. There is no teaching, suggestion or demonstrated incentive in either reference supporting the combination of a system for enterprise level UV water treatment with leak detection in high pressure municipal water delivery systems.

Applicant further submits that Cohen does not disclose a sound/vibration sensor disposed within a fluid treatment zone. As shown in Figs. 1 and 2, the sound/vibration sensors taught by Cohen are mounted to the exterior of the water pipe. Nothing in Cohen teaches or suggests mounting a sound/vibration sensor inside the pipes. Thus, even if the combination of Baarman et al. and Cohen is proper, Applicant submits that such a combination would not lead one of skill in the art to the invention claimed in claims 5 - 10 and 15 - 20. Withdrawal of the rejections under 35 U.S.C. 103(a) is, therefore, requested.

No fee is believed due for this submission. However, Applicant authorizes the Commissioner to debit any required fee from Deposit Account No. 501593. The Commissioner is further

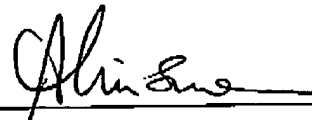
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authorized to debit any additional amount required, and to credit any overpayment to the above-noted deposit account.

It is submitted that this application is now in condition for allowance, and action to that end is respectfully requested.

Respectfully submitted,
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